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THE AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

GEORGE W. YORK, Editor. DEVOTED EXCLUSIVELY TO BEE-CULTURE. Weekly, \$1.00 a Year. Sample Free.

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NO. 22.



Great Britain imported, during the month of April, 1893, about \$17,500 worth of honey.

Bread and Honey was the principal food of the Pythagorians, as stated by Aristophanes, who says that those who ate this for their morning meal were free from disease all their lives.

Just One Year Ago To-Day (June 1st) we assumed the management of the AMERICAN BEE JOURNAL. It was with a feeling of uncertainty as to our ability to conduct it successfully that we began the work, and we are not sure yet whether the "Old Reliable" is doing all it should do to advance the best interests of the bee-keepers who read it from week to week. We think we know of ways in which there is abundant opportunity for still greater improvement, and just as soon as we feel financially able to bring the AMERICAN BEE JOURNAL up to the standard we have in view, we mean to do it.

We desire right here to most earnestly thank our friends for the cordial support and very encouraging words they have given us in our work the past year, and we trust that the friendships that have been formed may be lasting, and become deeper

and stronger throughout the coming months and years.

In view of the past few seasons of failure in the honey crop, we have been rejoiced to behold the grit, pluck, and good-nature with which so many bee-keepers have held on to the cause they hold so dear, and we trust that the dawning season of 1893 may fully reward them for the heroic faith, endurance and fidelity which was necessarily exercised the past few years. That the future may bring to our readers the full fruition of their every goodly hope, is our sincerest wish.

World's Fair Notes. — The great World's Fair, or more properly perhaps, the Columbian Exposition, has now been running for nearly one month, and from 20,000 to 50,000 people are daily on the grounds.

Owing to numerous misleading reports that have been published in the newspapers throughout the country, we thought that our readers might like to know just how things really are, and would be pleased to to have it direct from the editor of the BEE JOURNAL. Whatever we may say now, or at any time hereafter regarding the Fair, will be just as nearly the exact truth as we may be able to learn while right here at the "seat of war."

From our office we can go to the Fair all day, and it need not cost us over 60 cents—10 cents for round-trip street-car fare, and 50 cents for the admission fee. This, of course does not include refreshments, which can be had inside the gates at a slightly advanced price over provisions outside, where they are not excessively high. The better way is to buy a lunch before entering, as

you can find plenty of free and comfortable places to sit down while you eat, and good, filtered water is also free all over the grounds. As we never drink anything stronger than water (except perhaps tea and coffee), we can get along very nicely and cheaply when going to the Fair. A room with lodging costs \$1.00 per day, with meals extra, and these accommodations can be found all over the city. Of course, higher-priced rooms can be had, but we prefer the plain and home-like to the fancy or high-toned and high-priced. Splendid meals can be had outside the Fair grounds at from 25 to 50 cents each, in any part of the city.

In the foregoing we have enumerated simply the *necessary* expenses; any one who has plenty of cash, and wants to get rid of it, will find ample opportunity to lessen his "pile" without going very far in any direction here in Chicago. As to the danger of being robbed or swindled in any way, personally we have never had the least occasion to notice it. Of course we would not advise any one to carry or exhibit very much money anywhere, whether in Chicago or when attending a county fair. We never have about us over two or three dollars, so that were we robbed we would not lose much, neither would the thief be burdened with what he would get.

During the first three Sundays the Fair has been closed, just as it should be. There was not the least disturbance on account of the closed gates on Sunday—in fact, we don't think anybody has one good reason for wanting those gates opened on our National day of rest. For ourselves, when we get so we can't earn an honest living without working on Sunday, we'll get out of the way so as not to lead others into wrong doing and wrong living.

As to reduced railroad fares, we are unable to say anything very definite. Of course, all railroads will have reduced rates, but whether the percentage of discount will be uniform on all roads, we are unable to say. All can find out for themselves just what the round trip will cost, by applying to the local railroad agent.

We would not advise any one to be in a great hurry to come to see the Fair, as very many of the most interesting exhibits are not yet in place. We think it is safe to say that not all will be completed before June 15th. Four or five thousand men are still

at work there, but they are rapidly putting on the finishing touches.

Next week we will have something to say about the exhibits of honey, beeswax and aparian supplies.

What Bro. Alley Wouldn't Do.

—A few weeks ago we quoted some of the things that Bro. Alley had said he wouldn't do, but of course we couldn't tell in one issue *all* that he "wouldn't do." Here are a few more of his "I wouldn't" paragraphs from the *May Apiculturist*, that will likely be interesting to many of our readers:

I wouldn't attempt to keep bees without subscribing for one or more of the bee-papers.

I wouldn't make the mistake of cutting the foundation too large when filling the brood-frames. It should be cut $\frac{1}{4}$ inch short at the ends and bottom. The comb will then stretch out so as to touch the wood.

I wouldn't bother about wiring brood-frames if I could purchase the Van Deusen wired brood foundation. This celebrated foundation is made by placing the wire between two thin sheets of wax, and then the whole is subjected to powerful pressure. The wire never works out, nor do the bees ever gnaw the wax off the wire as they do in all cases where the frames are wired, instead of the foundation.

I wouldn't cut the limb by any means, if a swarm of bees settle upon the limb of a tree. I would wet the bees with a hand pump, or sprinkler of some kind, then hold a basket under the cluster, and with a quick upward blow against the under side of the limb, dislodge the bees, and let them drop into the basket. Descend the ladder slowly, if one is used, so the bees on the wing can trace the basket down. Dump the bees in front of the hive they are to occupy, and the job is done.

I wouldn't separate the bees, nor even look for the queens, unless they are valuable ones, if two, or even three, swarms should issue at the same time, and all settle on the same limb, or other object. I would put all the bees in one hive, and give them all the sections they could work in to advantage. Whew! what a pile of section-honey such a hoard of bees would store. I have had two swarms that united, fill the brood-chamber and 100 one-pound sections in less than three weeks.

Bicycles are getting to be very common now-a-days. We have two for sale, and any one wanting a bargain in a good bicycle, should write to the office of the BEE JOURNAL.

Tremendous Honey-Flow.—Mr. H. F. Coleman, of Sneedville, Tenn., wrote us on May 22, 1893, concerning the honey-flow in his locality. Here is what he said, which shows that at least in one place they are getting some new honey:

The weather here is fine, and we are having a tremendous honey-flow. Poplar is in its prime, with white clover just coming in. So far the season has been all that heart could wish, but owing to the weakened condition of the bees, by the cold winter, the honey crop will not be what it otherwise would have been.

With favorable weather we expect a continuous honey-flow until the closing of sour-wood and basswood in July. This long season may seem strange to our Northern friends, but in an ordinary season we have honey-producing flora in great abundance all the time from May 15th until in July—a period of nearly, or quite, 60 days. In the fall we have asters and golden-rod sufficient to produce winter stores, with frequently a surplus. H. F. COLEMAN.

Bee-Keeping for Profit.—The second edition of Dr. Tinker's new book is now ready to send out. It gives his New Management complete, and three years of added experience in its use by himself and other bee-keepers. Several new illustrations have been added, besides much new matter in regard to the use of perforated zinc. Price, 25 cents, postpaid, or clubbed with the BEE JOURNAL for one year for \$1.15.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 25 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

Getting Moths Out of Hives.

I have a few colonies of bees, and the moths have got into a couple of them. How can I get them out the easiest way? I have one book on bees, but it does not say a word as to how to get the moths out of the hive. My hives have movable frames.

LOUIS SCHWANER.

Pilot Knob, Mo.

ANSWER.—Perhaps you will not find a direct answer to your question in any of the bee-books. They will tell you to keep your colonies strong, and with

strong colonies you need have no fear of worms. Even if a few worms have secured a foothold in the hive, no serious consequences will follow if the colony be strong, especially if the bees are Italians.

But if you want you may do something to help the bees. Take out the combs, and you will see on the surface of the comb traces of the silken galleries spun by the worms. With the point of your pocket-knife, or something of the kind, pick a hole into the gallery at one end. Now if you follow along fast enough, and tear open the whole length of the gallery, you may get the worm. But the worm will hustle to get out of your way, and there is some chance that it may bury itself down in the comb where you cannot easily get at it.

So, instead of following it up, as soon as you have torn open a hole at one end of the gallery, do the same thing at the other end, and then follow it up, digging into the gallery as you go. You may crowd so hard upon the worm as to overtake it and be able to seize it with the point of the knife, but more likely you will merely drive it along until it comes to the hole at the other end of the gallery, out of which it will come, and if you are not lively it will jump off the comb and get out of your way. Having caught it, you can choose your own method of execution.

Honey, Not Swarms, Wanted.

I would like to ask you if it is possible not to have any swarms, and have the bees work on comb honey exclusively? I have 16 colonies of bees, some of which are part Italian, and some are the black bees; also some of them have but 3 frames, and the bees have comb every way but straight—it is all mixed up.

I am a beginner, and never handled bees before. Shall I transfer them to hives with frames, or take the comb out of the mixed-up ones, and put frames in the hives? It is a frame hive. I do not care to have any swarms, as I am crowded for room, and want to get all the honey possible, and no swarms.

G. D. LITTOOY.

Tacoma, Wash., May 18, 1893.

P. S.—I have the Simplicity 8-frame hive.

ANSWER.—To work exclusively for comb honey, get good crops, and prevent any attempt at swarming, is a problem over which many a one has

been puzzling for years. Many a one has sadly given up the problem as one impossible of solution. Different plans have been tried with more or less success—generally less—among them the plan of Simmins, of England. He claims that bees will not swarm so long as they have plenty of opportunity to build comb between the brood-nest and the entrance. So he puts sections with starters under the brood-chamber, and when sufficiently worked he puts these sections above, putting fresh ones below.

Mr. H. P. Langdon has patented an arrangement which is now exciting no little interest. It was described in the BEE JOURNAL for May 18th. The principle is to have the two hives standing side by side, alternately throwing the whole field force into one hive, then into the other, always shifting the supers to the hive that has the bees. This weakening at stated times each colony before preparations can be begun for swarming, prevents any desire in that direction. The plan will no doubt have thorough trial the present season, and it certainly promises great things.

If you want to handle your combs, you must certainly have them in frames. You can transfer, or you can drive out two-thirds of the bees with the queen into a hive with frames filled with foundation about the time bees begin to swarm; or, as soon as they get strong enough, put the old hive near by the new one which is to be placed on the old stand, then in three weeks drive out the rest of the bees, and add to the new hive.

Probably Killed by the Cold.

I had 3 colonies of bees in a row on a box 8 inches high during the past winter; there was plenty of honey in the brood-chamber, but I left 6 or 8 sections in the super that were filled with honey, so they could have plenty in the spring. They went into the super and ate all the honey, and died in the cells, with plenty of honey below. Some of the cells had three bees in them, and many had two. The rabbits worked under the box. Could that have disturbed the bees? There was an oil-cloth over the hives, fastened down good and close. A Mr. Tesky here put up his bees in the same way, and saved all but one colony.

MARY J. DUNKIN.

Lake View, Iowa.

ANSWER.—The rabbits were hardly to blame, and if the winter had been mild so that the bees could have had fre-

quent opportunities to shift their quarters, they probably would have come through all right. But the winter was severe, and there were long spells when bees would not break cluster. It is natural for bees to work upwards, and there being very free communication between the hive and super, the bees worked up into it, used up all the honey within reach, and then starved rather than to try to go below for stores. Indeed, if a bee had gone down she would probably have been chilled so she could not return.



R. F. HOLTERMANN.

Again we find it a pleasure to present to our readers a Canadian bee-keeper and aparian writer—perhaps the youngest, and at the same time one of the most experienced, to be found among our cousins over in the Dominion. Mr. Holtermann's name is quite well known to the apicultural world, through his many interesting and practical contributions to the literature of apiculture during the past perhaps ten years. The following presents some of the principal points of interest in his life :

Richard Ferdinand Holtermann was born in Hamburg, Germany, on June 14, 1860, thus making him exactly 33 years old in about two weeks. The general impression is that he is much older, but he began bee-keeping and his career as an aparian writer very young. He is from Norwegian extraction on his father's side, the late Ivar S. Young having been acquainted with many of his relatives, who hold some of the leading positions in Norway.

At the age of two years, Mr. H.'s parents removed with him to Canada, settling in the county of Renfrew, in Ontario. He received a fair education through a governess, a private school

near Ottawa, Collegiate Institute at Ottawa, Upper Canada College, and at Day's Commercial College in Toronto.

Always fond of rural life and occupations, he went to the Ontario Agricultural College at Guelph, Ont. Besides making many friends there, he left with some of the highest prizes, ranked second in general proficiency, and took honors in every subject. When leaving, President Mills, amongst other statements, says this in a recommendation: "Honest, honorable and upright, a keen observer, and a young man who will do everything in his power to succeed."

Mr. Holtermann has spent the most

tal in bring the convention to Brantford. At Columbus there was a strong movement to elect him President, but he declined in favor of another.

He has been President of the Ontario Agricultural and Experimental Union, which has been pursuing important investigations upon the Foul Brood question, and for years has been Secretary of the Union. He is President of the Brant Bee-Keepers' Association. He has for two years attended the regular meeting of Farmers' Institutes, being appointed lecturer by the Ontario Government upon bee-keeping. He has just completed a pamphlet for the Dominion Government for distribution by the Emigration Department in Europe.

At Brantford he is a member of the Brant Bee-Keepers' Association, the Poultry and Pet Stock Association, the Farrington Debating Society, and the Y. M. C. A. He belongs to the Ancient Order of United Workmen, Independent Order of Odd Fellows, and for this latter he cheerfully blames Dr. A. B. Mason.

There is, perhaps, no one better known as a bee-keeper to the general public; this is on account of his extensive writings through the general press, such as the *Globe*, *Mail* and *Empire*, at Toronto; the *Star*, in Montreal; the *Farmers' Advocate*, the *Canadian Live Stock Journal*, the *Rural Canadian*, and the *Canadian Horticulturist*, to all of which he has been a paid contributor. He is well known as a writer in apicultural journals, and has been a regular contributor to the *British Bee Journal*. He has also written for the *Norwegian Bee Journal*. He speaks German, and is fairly well acquainted with French.

On May 17, 1887, he was married to Lois, daughter of Mr. S. T. Pettit, of Belmont, Ont., having met Miss Lois at the North American Bee-Keepers' Convention at Rochester. They have, besides two daughters, one son, William Ivar, named after Thos. Wm. Cowan and the late Ivar S. Young.

Last year he secured about 43 pounds of comb and extracted honey per colony, and reared about 500 queens. He put into the cellar 83 colonies and 7 nuclei, and lost only two nuclei in wintering.

G.



R. F. HOLTERMANN.

of the time since in the country. He became interested in bees through Root's "A B C of Bee-Culture" and Cook's "Manual of the Apiary" at the Ontario Agricultural College. He spent two seasons with Mr. D. A. Jones, of Beeton, Ont.

In 1882 he was appointed Secretary of the Ontario Bee-Keepers' Association, and has also been a director of it. He attended the North American Bee-Keepers' Conventions at Rochester, Detroit, Chicago, Columbus, Brantford, Albany and Washington. He has twice been a Vice-President of the North American, and once its Secretary, being instrumen-

Your Neighbor Bee-Keeper
—have you asked him or her to subscribe for the BEE JOURNAL? Only \$1.00 will pay for it for a whole year. And, besides, you can have Newman's book on "Bees and Honey" as a premium, for sending us two new subscribers. Don't neglect your neighbor! See page 643.



Transferring Bees from a Gum-Tree.

As per promise on page 332, I will now report on transferring a colony of black bees from a hollow gum-tree, in a swamp, to two hives.

The tree stood ten feet out in the water, and the bees had an entrance 12 feet up the tree. Procuring a ladder, I surveyed the tree, and found it a mere shell, much of the wood only an inch thick.

After building a platform in the water to work on, I smoked the bees from the bottom, then proceeded to saw down the old gum-tree, having secured a rope to the top, and drawing it tight in the direction it was to fall. The bees were all in by this time, and down came the tree. (I had wrapped a tent around the entrance to keep the bees in.) In falling it struck the bank just right, six inches above the water.

Unwrapping the entrance more smoke was blown in. With a saw I soon cut half way through the log, in sections of about two feet, finding comb, honey and bees for 11 feet in the cavity.

Now began the fun. Splitting one section open, I found a mass of bees, honey, and combs, eight combs thick, so cutting a palmetto leaf for a fan, not having any bee-smoker, I fanned smoke in, and drove the bees from my work, and commenced removing combs, honey and brood, keeping them separate.

The first day we succeeded in felling the tree, removing combs and honey for eight feet, and had the bees all driven before us. Then packing some of the southern gray moss in the cavity, we wrapped the tent all around the bees and tree, and adjourned for the night.

The next morning it rained a torrent, until noon, deluging every thing, and raising the water up to the tree. It soon cleared away, and by sundown the

bees were all driven out on the log, under the tent, honey and combs all removed, four frames filled with brood-comb, nicely clamped in, with round sticks tied at the top and bottom.

Now placing the hive close by the bees, and brushing a few on the alighting-board, I sat down and watched developments. It was just fun—a steady stream of bees soon headed for the hive, and poured in, apparently glad to find a home. The hive would not hold them, and not having another hive, I got one of Armour's canned-beef boxes, put in cross-bars, and clamped a few pieces of brood-comb to them, brushed a few quarts of bees from hive No. 1 on the ground, picked up hive No. 1, carried it away a hundred yards, and set the box where the hive had stood, and brushed some bees on the board in front. They soon ran in, and thus colony No. 2 was started, and left there to catch those that would naturally return from hive No. 1.

Now padding the top of my head, I picked up colony No. 1, and started home a half mile away, and with my new pets buzzing loudly at their new condition, balanced on my head, we soon reached home, and deposited them carefully on the verandah under my bedroom window.

The next morning I found they had cleaned house, and gone to work as natural as though nothing had happened. In four days I opened the hive, and was surprised to find all the brood-combs well built into the frames, and four frames of guide-comb partially drawn out, and lots of orange-blossom honey placed therein. Cutting the strings to the clamps, on top only, lifting the frames with the left hand, I peeled off the clamps, replaced the frames, adjusted all, leveled the hive, and not a cross bee appeared. My colony, in five days, was as earnestly at work, and as much at home, as any bees in Florida.

Now as to colony No. 2, that was formed from remnants: On the fourth day I visited them, and found them as earnestly at work as No. 1, but not so many bees. Removing the cover, I found six queen-cells started, and all happy. In ten days more I will give them a comb of brood from No. 1, and then have two good colonies from the old gum-tree, a big dish-pan full of honey, and several pounds of wax for my $1\frac{1}{2}$ days' work—not a bad investment.

Now to any one trying the experiment, as I have done, it is necessary to work systematically, and have great patience or you will give up in disgust, but it

can be done—I have done it, and made a success, under very adverse circumstances, and now, while I write these lines (March 23rd), my pets are busily at work not four feet from me.

This is an eye-opener to the "Florida cracker," and many explanations of surprise and wonder we hear as they pass our door, and see my bees all around me, in a cloud. As one colored man said to-day, "Seems to me these Yanks can do 'most anything they sets their hands on."

In transferring I received a dozen stings, and being a sufferer from sciatic rheumatism, this will be a good test as

Report of the Texas State Bee-Keepers' Convention.

(Continued from page 652).

SECOND DAY—CONCLUDED.

A general invoice was taken of the number of colonies, spring count, in 1892, honey produced, and the number of colonies now owned, spring of 1893.

Dr. Marshall stated that he took the first premium at the Dallas Fair, and had one colony. Dr. Howard, through the kindness of Bro. Graham, had one colony of the best bees he had ever seen;

STATISTICAL REPORT.

Name and Address.	No. Col's.	Lbs. Ext.	Lbs. Comb.	Col's.
	Spring '92.	Honey.	Honey.	1893.
Dr. W. K. Marshall, Marshall.	1	—	—	12
Jason Ayer, Goldin.	8	—	—	250
Joel Simmons, Kingston.	100	240	—	100
C. J. Cutcher, Dallas.	13	—	—	450
J. P. Huckleberry, Greenville.	3	—	—	13
T. Carter, Alliance.	2	—	—	150
Jennie Atchley, Greenville.	400	1000	—	8
J. R. Atchley, Arlington.	20	400	400	400
T. E. Miller, Grand Prairie.	6	—	200	15
W. H. White, Deport.	9	600	400	20
D. T. Willis, Daingerfield.	41	600	400	41
Chas. Williams.	1	75	—	4
George Wilson, McKinney.	30	—	—	30
J. A. Meeks, Stone Point.	20	150	90	33
G. W. Reeves.	5	75	—	8
A. H. Jones, Goldin.	65	60	—	21
A. M. Tuttle, Gainsville.	60	—	—	68
I. H. Hightower, Kingston.	20	150	—	24
J. A. Bailey.	10	—	900	33
W. R. Graham, Greenville.	100	1200	800	100
J. F. Teel.	60	—	—	45
C. M. Davis, Denison.	10	—	150	10
R. E. L. Peck, Rockwall.	10	900	100	20
J. D. Givens, Lisbon.	50	750	750	50
B. F. Carroll.	35	2450	—	35
Dr. J. D. Bass, Pittsburgh.	16	—	—	8
J. A. Cathey, Vansickle.	4	—	—	1
J. A. Bailey, Walton.	11	60	—	16
W. E. Smith, Goldin.	6	100	—	12
J. W. Judy, Floyd.	—	—	—	4
G. P. Cheaney, Wagner.	—	—	—	26
R. L. Parson, Altoga.	18	—	100	24
H. L. Bolton, Alliance.	28	400	100	35
Melvin Kimbrough.	4	—	21	5
Willie Atchley, Greenville.	4	25	50	4
J. S. Robinson.	6	—	—	15
P. G. Carter, Kingston.	2	—	75	3
W. T. Pryor, Farmerville.	100	2000	100	100
Total.	1284	13,395	4942	4953

to its being a "sure cure." No benefit has so far appeared as the result.

I have to-day put on supers with 21 sections, 1½ pounds each, and will soon surprise the "crackers" with some section honey from orange blossoms, which they have never seen. Bee-keeping in Florida seems to be a kind of "go-as-you-please" business.

C. F. GREENING.

Orange Park, Fla.

they were uniformly 5-banded Italians. The others reported as in the table.

A call was made for the charter members present, and Dr. W. K. Marshall, W. R. Graham, Dr. Wm. R. Howard, George Wilson, and I. H. Hightower responded.

The election of officers for the ensuing year was next held, which resulted as follows:

President—Dr. W. K. Marshall, of Marshall.

1st Vice-President—W. R. Graham, of Greenville.

2nd Vice-President—A. M. Tuttle, of Gainsville.

A Binder for holding a year's numbers of the BEE JOURNAL we mail for only 50 cents; or clubbed with the JOURNAL for \$1.40.

Treasurer—George Wilson, of McKinney.

Secretary—Mrs. Jennie Atchley, of Greenville.

Greenville was selected as the next place of meeting. The convention was closed with prayer by Dr. W. K. Marshall, having adjourned to meet on the first Wednesday and Thursday in April, 1894.

After the adjournment, the visitors were invited to go through the supply factory of Wm. R. Graham & Son, and queen-rearing apiary of Mrs. Jennie Atchley. After viewing the machinery, and seeing the interesting methods of rearing queens, and the fine queens and beautiful 5-banded workers, a sort of general "love feast" was manifested, hand-shaking and adieus before parting, all departed carrying with them happy remembrances of the enjoyment of the meeting, stimulated with a new and stronger courage and zeal, each one feeling that he was benefited by what he had seen and heard, and declaring within himself to try to attend each succeeding meeting, and make the Texas State Bee-Keepers' Association the best in the South. E. J. ATCHLEY, Sec.

Those in the cellar ought to do the best, under such condition.—WILL M. BARNUM.

I don't know, but I think I'd chance those out-doors, because they'd have better air.—C. C. MILLER.

I presume the cellar-wintered bees, from the fact that they will not have to endure the sharp changes of temperature.—J. M. HAMBAUGH.

Bees winter best out-of-doors where the climate permits them to fly out frequently. Bees kept in a cellar should not be carried out for a flight.—P. H. ELWOOD.

Those out-doors will winter the best. Putting those in the cellar out every time the weather was warm enough to fly, would be very likely to kill them.—M. MAHIN.

If the temperature outside ranges from 30° to 50°, I see no use in bothering with in-door protection. I should want those inside to winter a *good deal* better before I would practice it.—EUGENE SECOR.

I should prefer to have the bees out-doors, under the above conditions, for the reason that I would be sure of pure air and flights without the labor of taking them out and returning to the cellar.—J. H. LARRABEE.

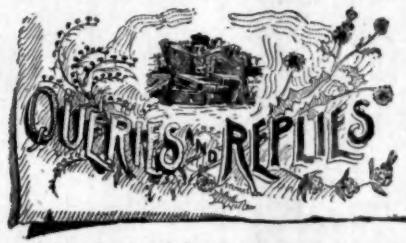
In a warm winter, like those of 1889, 1890 and 1891, those out-doors. In a cold winter, like the last one, I should like the cellar. I think good cellars will be at a premium for a while after this winter.—A. J. COOK.

I have no experience in wintering bees in the cellar. I should think that the 50 put into the cellar and taken out on warm days, would induce them to rear brood and use honey unnecessarily.—MRS. JENNIE ATCHLEY.

Those out-of-doors, if they are let alone. By moving those in the cellar from time to time, as mentioned, they will be greatly disturbed and suffer therefrom. I should much prefer not to take them out at all.—J. E. POND.

I would not take them out at all until spring came for good. But to your question, I should say both ought to winter about equally well. But where, oh, where, can you be sure of a uniform temperature of 30° to 50°?—C. H. DIBBERN.

Those out-doors. Why? The disturbance caused by moving out and in, with the temperature not above 50°, would be quite detrimental. Leave them in the cellar until the time to put



Comparison of In-Door and Out-Door Wintering of Bees.

Query 873.—Suppose I put 50 colonies in the cellar and leave 50 colonies out, keeping the cellar at 45°, and taking the bees out of the cellar for a flight whenever those out-doors have a flight, the temperature outside generally varying from 30° to 50°. Which ought to winter best, supposing those outside are put in the best shape for out-door wintering? And if not too much trouble, please tell why?—P. N.

I cannot speak from experience.—J. P. H. BROWN.

You can tell by trying. We leave all of ours out.—E. FRANCE.

I would not carry them out of the cellar for a flight.—MRS. L. HARRISON.

In Missouri, the ones you left out-doors, every time.—EMERSON T. ABBOTT.

them out in the spring, and those in the cellar will winter best. Of course, I'm presuming that those put into the cellar have been prepared for winter with the same care that those out-of-doors have, and that the cellar is all right, too.—A. B. MASON.

The colonies wintered out-of-doors will winter best at the temperatures named, every time. There are many reasons why they would winter better, but pure air and freedom from dampness has as much to do with it as anything.—G. L. TINKER.

If I had such a temperature out-doors, during winter, as that quoted, I should not try for cellar-wintering at all. In a case of cellar-wintering, it does not pay to carry the bees out for a flight, but on the whole it is a damage to the bees being thus wintered.—G. M. DOOLITTLE.

If the winter is mild, they will winter equally well, but those out-of-doors will consume the most honey, because they have to eat to keep warm. If the winter is hard, those in the cellar will winter best, because their intestines will be less loaded with feces.—DADANT & SON.

See recent articles bearing on the subject. With the circumstances as you give them, those outside would almost certainly winter better in nearly all localities. Those inside would probably get along better without being taken out at all until it was time to leave them out.—JAMES A. GREEN.

Those left outside, to be sure. Because wintering in the cellar is a choice of evils in places where the temperature is generally from 20° below zero to 20° above. With your temperature you have no evil to provide against. Besides, so much shifting of those in the cellar would be detrimental.—R. L. TAYLOR.

I do not think that any one could answer this question without trying it. But it is my opinion that they had better remain outside than to be handled so often. And I think they winter better in the cellar (without so many changes) than outside under the condition named; so that ends it, with me.—JAS. A. STONE.

In my locality I should expect to bring fully 95 per cent. through all right, if they were all right in the fall. If I could keep the cellar at 38° to 40°, they would be better off without any flight until about April 8th to 10th. When you say those out-doors are in the best possible condition for wintering, "you say a great deal."—H. D. CUTTING.

I think the bees outside would do the best, but I might answer with more certainty if I knew your locality. Making all things equal, it is easy to see that the necessary disturbance that the cellar bees must submit to in being carried in and out of the cellar must give the advantage to the outside bees. But it would certainly depend upon the severity or openness of the winter.—G. W. DEMAREE.

If you mean that it gets no colder than 30° above zero out-of-doors, I will take the chance on the 50 left out. The reason would be that, in the climate you indicate you are in, you might have to take the cellar lot out once a week or more. If you took them out every time the others had a flight, so much moving would be a damage to the bees, and a great bother to you. Here in Wisconsin I would give the preference to the cellar lot, especially the past winter, as we have had 100 days of continuous good sleighing, and no day in the hundred that bees could fly safely.—S. I. FREEBORN.

As you state it, they ought all to come out bright and nice in the spring. Mine do, both from the chaff hives out-of-doors and from the cellar. But after they have been taken out of the cellar to stay, you will notice in about three weeks that those wintered out-of-doors have a decided advantage over the others—they having begun to rear more brood in the cellar than they are able to protect from the cold in the yard, much of it chills, and the bees in their endeavor to supply so much brood with water and pollen, venture out in inclement weather, and are lost; hence, your loss from spring dwindling is much greater with the cellar-wintered bees.—Mrs. J. N. HEATER.

“A Modern Bee-Farm and Its Economic Management,” is the title of a splendid book on practical bee-culture, by Mr. S. Simmins, of England. It is 5½ x 8½ inches in size, and contains 270 pages, nicely illustrated, and bound in cloth. It shows “how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man.” It also illustrates how profits may be “made certain by growing crops yielding the most honey, having also other uses; and by judgment in breeding a good working strain of bees.” Price, postpaid, from this office, \$1.00; or clubbed with the BEE JOURNAL for one year, for \$1.70.

Have You Read that wonderful book Premium offer on page 675?



Methods Used for the Prevention of Swarming.

Written for the American Bee Journal

BY R. F. HOLTERMANN.

At this time of the year there is perhaps no more important subject than the one of swarming. Until I saw Mr. Pratt's latest self-hiver, I had no faith in the utility of this invention, but upon studying it I felt, and feel still, that by means of it we are going to reach those who keep only a few colonies, and cannot watch their bees for swarms. Again, there are others who, for various reasons, do not find it desirable to hive the swarms; these will, I have no doubt, find the self-hiver very useful.

That the self-hivers can be improved upon, I have no doubt—in fact, I think I could improve on them already, but even as they are to-day they are useful. The prevention of swarming has engaged my attention every since Mr. L. C. Root spoke upon that question at the convention of the North American Bee-Keepers' Association held at Rochester, N. Y.

I have, for comb or extracted honey, been able to largely prevent increase by means of shade, ventilation, and the judicious giving of room, and by so doing I have been able to have an increase of as low as 5 per cent., and in no case greater than 20 per cent., for the last six years.

In producing comb honey it has been the aim to secure honey not alone for the market, but also for exhibition purposes, and the product has compared very favorably with the best shown at our leading exhibitions. Many beginners have made shipwreck because they attempted to increase too fast; if they would have prevented increase all they could, thus securing more honey, and having their bees in better condition, then buying more bees in the spring, they would have done better. This is the advice I would give every beginner.

When the bees begin to whiten out the combs along the top-bars in the brood-chamber, unless the honey-flow stops, supers are given. I have an entrance the entire width of the hive, and as the weather gets warm I raise the back of the lid to allow a current of air to pass between the quilt and lid. As the weather gets still warmer, a broad board is laid on the lid for shade, this board to better shade is moved once a day, thus not only shading the tops of the hive, but also the sides. If the nights are unusually warm, the lids are left up all night, if not, they are put down towards evening. More than once, after a sultry evening, we have had to jump up in the night and let down the lids, to prevent rain from getting in, but it pays well. Better yields of honey are secured, and I have had three full Langstroth supers to advantage on one hive.

I am too lazy to hunt out queen-cells and destroy them; if the bees will swarm, I let them, and then put the new swarm on the old stand; this in 95 cases out of 100 it prevents any after-swarms, and gives us all the worker force with the new swarm. Swarms are hived on starters, and put to storing comb honey, as a rule.

The method of changing the hive for the worker-bees I have never tried, and here let me say it appears to me it has been forgotten that this system is not a new one brought before bee-keepers, but was brought out in a bee-paper published in Canada some years ago. Mr. C. W. Post, of Murray, Ont.—a very successful bee-keeper, running between 300 and 400 colonies—gave his plan. In brief, it was this:

Upon a post rested two pieces of timber, the pieces crossing one another over the post, the whole forming four arms which could be revolved upon the post. At the end of each arm, and upon the arm, was a colony of bees, and from the first day the bees could fly the stand was given one-quarter turn. In this way the flying bees, every day they flew, went into a new home, and the swarming impulse was kept down.

Mr. Post is known as a quiet and unassuming, yet successful, bee-keeper with wide experience. I mentioned Mr. Post's method at the Albany convention, and I think the article I refer to was copied into the AMERICAN BEE JOURNAL at the time.

I certainly think we should aim at keeping down swarming as much as we can—therein lies one of the secrets to success. To do so by means of cutting

out queen-cells would be of no use to me—it means too much work.

Some years ago I received a letter from some one, stating he had a method to prevent swarming; he was getting a few to test it, and upon their recommendation he would sell the secret; would I promise not to tell his method? I wrote back saying, "Yes, under two conditions—it must not be something I knew of already, and it must have nothing to do with cutting out queen-cells." He answered that swarming was not prevented by cutting out queen-cells. I answered, "All right; send the method."

Finally I had a letter saying part of the plan was removing queen-cells, so I refused to try the plan.

It is wonderful, however, to note the effect of shade and ventilation to prevent swarming. The work must, however, be done regularly, and without fail. I may say the Ontario Agricultural and Experimental Union is undertaking the testing of Mr. Pratt's latest self-hiver, and I should like to hear reports from those who test it this season.

Brantford, Ont.

A Question About the Langdon Non-Swarming Device.

Written for the American Bee Journal

BY JNO. M. DAVIS.

I am greatly interested in this device, as described in the BEE JOURNAL for May 18th, and I think it will prove to be an important invention, provided the continual loss of bees through the escape, with no possible chance for the young bees or brood to be supplied with water, will not cause a serious loss to the colony. It is a well established fact that bees rearing brood consume large quantities of water daily. Can they be deprived of this without loss?

I bought a few colonies of bees in box-hives too late to transfer conveniently, and in order to have them store honey in frames I have been "jumping" them as fast as they show a working-force, so as to strengthen colonies in Langstroth hives. I find that for a few days the "jumped" colonies take water eagerly, showing very clearly that they need it when deprived of the working-force.

To be sure, we could water them when using the Langdon device, except in out-apiaries, just where it would be most valuable.

Please give us light on this point.

Spring Hill, Tenn.

Why Do Some Suffer from Bee-Stings and Others Not?

Written for the American Bee Journal

BY EMM DEE.

"Well, I'd like to know" why some people suffer so much from bee-stings, and others are scarcely affected? Now, how do you account for such difference?

Pretty hard to tell, but as I've given the matter considerable attention, I may state what I believe, and let you judge for yourself.

You see everybody is differently constituted, in mind, body, and its various functions, as you, of course, well know. Your face, general form, voice and physical activity is unlike that of any other person. The system, doctors say, is constantly undergoing changes of waste and repair. The waste is disposed by excretions of various parts of the general economy, the lungs, kidneys and skin doing a larger part of this important work.

Well, now, this waste product—we'll say of your skin, when perspiring—is unlike that of any other person. There is a peculiar odor to it not possessed by any other individual. It is by your scent that your dog is able to track your footsteps at long distance, or through a crowd. The odor may be pleasant or otherwise, according to natural causes no one can change. If unpleasant, it by no means argues that the person is unclean; the most scrupulous neatness could not change this odor inherent in the sweat-glands.

Not long since I asked a good old "uncle," a negro of irreproachable habits, why it was that the odor from their bodies was so—so—rank! "Well, sah, don't know 'bout dat, sah, but I reckons 'taint no stronger in we black folks den the smell of white people is to us!"

Then, too, the exhalations from our bodies, like our voices and temper, may be soothing or irritating, and it is to this peculiarity I attribute the friendliness or enmity of bees. If, when they come in contact with you, the odor emanating from your body is *soothing* to them, they will linger on your skin or clothing in contentment, but if your secretions are *irritating*, they at once become vicious, and a hasty retreat is your safest course.

From childhood I have been interested in bees (with no present claim to extended knowledge concerning them), and have observed their peculiarities

with great interest. I have surprised some apiarists by the temerity with which I could, unprotected, even in swarming-time, approach them without receiving punishment; the only time they would sting being when squeezed by accident, as by my shirt-collar against my neck, and then their sting would feel like the pricking from a cambric needle, with no appreciable trouble following. I have never experienced a particle of irritation or swelling resulting from a bee-sting. Whether the fact that I speak to them in a quiet, caressing tone enhances my immunity from their vengeance, I am uncertain, but I believe it best to do so.

Sunnyside, Ills.

Experiment in Cellar-Wintering of Bees.

Written for the American Bee Journal

BY W. J. CULLINAN.

On Dec. 3, 1892, I placed 4 colonies of bees in my cellar for an experiment. They had been fed about 12 pounds of sugar syrup each, which, together with 10 pounds of natural stores, gathered from fall flowers, gave them about 22 pounds each, on Oct. 1st.

The cellar was under my dwelling—size, 18x40 feet—and I knew that if we got much cold weather, the temperature would reach the freezing point, or lower; still I made no provisions for heating artificially, as it was my intention to demonstrate for myself the effect of a low temperature upon the bees while in the cellar.

Well, we got the cold weather all right, and lots of it, and the mercury in the thermometer marked 28° above zero, by the last of December, and remained at about that point for two weeks, then raised to about 32° for a week or ten days, and then came a day when it got up to 45° outside, and I set them out for a flight, fully expecting to find them victims to intestinal derangement. To my surprise they showed no diarrhetic symptoms whatever, and seemed perfectly healthy.

After returning them to the cellar another cold wave struck us, and the mercury promptly descended to about the point reached before, and hovered between that and the freezing point until the last of February. About this time water got into the cellar, which left it very damp, and although over a month too early, I thought it best to set them out for good. They had a flight

the day they were taken out, showed no signs of diarrhea, and a pint measure would have held all the dead bees from the 4 colonies.

The next day after putting them out the thermometer marked 8°, and a friend who called said I would lose them. But they seemed proof against all kinds of treatment, for at this date (April 3rd) they are in good condition, except the loss of one queen.

My cellar was reasonably dry up to the time of taking the bees out. The bees were in 8-frame Simplicity hives, with flat sealed covers, and three inches of sawdust over the same. The bottom-boards were left on, and the entrances, $\frac{1}{2}$ inch by width of the hive, were left wide open while in the cellar, but contracted to about five inches when placed upon the summer stands.

Quincy, Ills.

The Prophecy of the Honey-Flow for Iowa in 1892.

Written for the American Bee Journal

BY SAM WILSON.

I have read Mr. Thomas Johnson's article on page 533. He tries to prove that my predictions resulted entirely different to what I said they would. He tries to prove that western Iowa had an extra good yield of honey—double the amount of the eastern part. He first reported that he had taken 40 pounds of white clover honey per colony up to July 18th, and that the bees were going like rain to linden, but later he writes that linden only produced honey for two days; that a hot wind from the south dried it up, so from that the flow of white honey stopped, and he had only one or two days to get any more than the 40 pounds per colony, so you can see that was no good yield, and that was two-thirds of his crop, that would make 50 or 60 pounds per colony.

Mr. Frank Coverdale, of Welton, Iowa, did that well, or better, when he says his bees did not get to work more than three days out of a week on account of wet weather, and I have letters from bee-keepers that show that it did rain as much or more than I said it did all over the larger part of the middle and eastern Iowa, and was fine weather in the west, but now he tries to show that the honey-flow was not as good in Jackson county and southwest to Tipton, where I said it would be the best. He says if his informer is correct, the flow was not as good there as in the adjoin-

ing county, and far behind his locality. If all who read *Gleanings* will turn to page 310 of April 15th, present volume, and read Mr. Oliver Foster's account of his visit to Mr. Staininger, who lives at Tipton, they will see whether I missed it or not. Tipton is the place I especially named, saying they would have the best honey-flow from the northeast through Jackson county, of anywhere in the State. Mr. Staininger, from 170 colonies, spring count, secured 12,700 pounds of honey. Here is one paragraph of what Mr. Foster says of his honey:

"This was in his large and very neat and clean honey-room and shop, with a large and well-equipped work bench in one end, an extractor and other honey-utensils in the other, a foot-power saw at one side, and the whole middle of the room occupied by a huge pyramid of glassed cases of comb honey of snowy whiteness. Several other piles of nice fall honey stood at the sides; through the back window and screen door I could see a neat apiary of about 230 colonies."

Who can show a larger crop in the whole State, or a better average from that number of colonies? And it must not be forgotten that it was the "off year" for linden, that is, it never bloomed in eastern Iowa to amount to anything. He don't know what the editors of *Gleanings* based their opinions on to make them think the honey-flow of 1892 was better than the few years previous. Their opinions were based on the reports, all that could be got by the aid of the AMERICAN BEE JOURNAL and *Gleanings* combined. What few reports he could get, would not amount to anything compared to these.

Mr. Johnson warns me to be careful or I will jump into a field where clover and linden don't abound. It is the condition that it takes to produce a crop of honey that I claim to know about, and of course I would not suppose linden and clover honey could be got from anything but linden and clover, but Mr. Johnson's bees may be bred up to such a high pitch of intelligence that they can get honey from prairie-grass. I would think they could do that about as soon as I would think they would steal eggs, one colony from another. I guess Mrs. Atchley will want to go up there to take lessons of Mr. Johnson on queen-rearing, and also bring down to Texas some of his bees, that are acquainted with such clever tricks; but they might not retain those qualities down here in "Dixey Land."

Cosby, Tenn.

Are Hybrid and Black Bees Worth Improving?

Written for the American Bee Journal
BY JAS. A. GREEN.

I was greatly surprised to see, in the answers to Query 867, how many there were who said, in effect as well as in words, "Let well enough alone." I would have little fault to find with those who take the drift of the inquiry to be whether or not the bees have degenerated, or are likely to degenerate or "run out," through close in-breeding.

Although in-and-in often produces bad effects with other animals, I do not think it probable that bees under ordinary circumstances will breed so closely within a certain strain that deterioration will result. Nature has guarded against this by providing that the mating of the queen and drone shall take place in the air at a distance from the hive.

I think it is an entirely unwarranted assumption that the bees in question have re-queened themselves for years from their own progeny. All of the queens might have been reared by the bees themselves, but the drones with which they mated may have come from several miles away. It is for this reason that I would not apprehend any degeneracy from in-and-in breeding. Still, it is often the case with bees, as with other animals, that an infusion of new blood gives renewed vigor. This is especially the case when different varieties are crossed.

What I specially deplore in these answers, is the advice to "let well enough alone." Where would the world be if men had been satisfied to work on this principle? There is scarcely an animal or plant that man makes use of for his pleasure or profit that has not been greatly improved by breeding or selection. Within the memory of the present generation, careful selection, crossing and breeding have greatly improved our domestic animals, and added millions of dollars to our national wealth.

The long, lean, slab-sided, razor-backed hog of a few years ago was considered good enough by his owner, but the modern hog is a far more valuable and profitable animal.

See how the cow has been improved as a producer of milk and butter as well as beef.

Witness how the standard of horses has been raised, both for speed and draught animals.

The same improvement may be noticed all along the line of our domestic animals, to say nothing of fruits, grains, and vegetables. Are we to conclude that any mongrel breed of bees are "good enough?"

It would seem, from the language of the querist, that he has paid little or no attention to the breeding of his bees. It is a fair inference that he has had no bees of improved strains with which to compare them. How, then, is he to know that his bees are as good, comparatively speaking, as he thinks they are? He says they are prolific, healthy, and good workers. This might truthfully be said of almost any lot of bees, but a trial of them in comparison with the best bred strains might show that as compared with these they were very inferior.

"Every crow thinks his own crowling whitest," and the owner of live stock of any kind, if it is only a yellow dog, is very apt to consider it about as good as there is. The men who are wedded to such ideas as that, must expect to be left behind in the march of progress.

The bee-keeper has the advantage over the breeder of stock of almost any other kind, in that he may make a comparative test for himself of the different varieties, at only a trifling cost. If the breeder of horses or cattle should wish to make a complete change in the breed of his stock, he must go to a great deal of expense in disposing of every animal and getting others in their place. If he adopts the usual plan of "grading up," he must still go to considerable expense for pure-bred sires.

The bee-keeper can make a complete change in his stock at comparatively small expense, and have every bee of the new variety within less than three months. With a money outlay that is really insignificant, he can have all of his bees reared from superior stock, and having nearly all the good qualities of the improved race. For two or three dollars, or less, he may test improved varieties for himself alongside of his old ones. In this way he may gain knowledge from practical experience, which is always the best of teachers.

The best way for the inquirer to do, would be to procure from some reliable breeder one of his best breeding queens, and rear queens from this. It is almost certain that this stock would be an improvement on what he has, so he would probably be safe in rearing from them enough queens to supply his whole apiary. Unless he is certain that his breed-

ing stock is desirable in every way, it might be safer for him to buy two or three queens of each of several breeders, and, after a thorough test, get a good breeding queen of the stock that suited him best.

If he can afford the money better than the time required to rear the queens, let him get from reliable breeders several dozen queens, which, at the proper season, may be procured at very low rates. Then let him rear all queens from selected colonies, or, if he prefers to let the bees rear their own, keep drone-traps on all undesirable colonies, which will somewhat reduce the chances of impure mating. To keep an apiary pure when there are other races within bee-flight, requires a constant struggle, but the bees of almost any apiary may be very much improved by a very little trouble in the way of selection and rejection.

As to race, there is really but little question. The Italians have fairly won the right to be considered the best variety of bees cultivated. Although a few good bee-keepers think very highly of the Carniolans, all the other races that have been introduced, some of them with much blowing of trumpets and highly imaginative recommendations, have proven undesirable, and have been discarded. In this connection be it observed that the so-called "Golden Carniolans" are not Carniolans at all.

The beginner is specially warned against spending his money for any novelties in bees unless he wishes to test them in comparison with what are recognized as the best, and can afford to spend money for that purpose.

The Punic bee fiasco should be a sufficient warning to go slow in this direction. It might be a great misfortune to bee-keepers at large to have an inferior race of bees scattered broadcast over the country, especially if they were put into the hands of those who knew nothing of better races, or who would become disgusted with the unsuccessful experiment of improvement, and make no effort to repair its evil effects.

In selecting that which all recognized as good, there is little opportunity to go astray. To replace or cross the bees in question with Italians could hardly fail to improve them, and the advantages would be great as compared with the cost.

Ottawa, Ills.

“Bees and Honey”—see page 675.

Those Foul Brood Experiments —Parthenogenesis.

Written for the American Bee Journal
BY C. J. ROBINSON.

On page 215, Mr. J. H. Larrabee records his "review of a Canadian report of foul brood experiments." Referring to my record on page 56, he says: "Mr. C. J. Robinson states that a glass cannot aid the eye to distinguish foul brood virus from other germs!" He offers no evidence nor argument to invalidate my "statement," yet edicts it grossly false. He quotes Prof. J. J. Mackenzie as authority to "directly contradict" my quoted statement. Mr. Mackenzie, it seems, has no knowledge of foul brood, for he says: "I certainly would not be prepared to spot foul brood in an apiary, though I certainly *think* I can under the microscope." Not prepared to identify a case of seething foul brood in a colony, yet Mr. Larrabee assumes to contradict my statement because another has "a new idea"—thinks he can distinguish, pick out, foul brood germs from many other kinds always present in decomposing brood.

Mr. Cheshire recorded in the *British Bee Journal* in 1884: "I have been able to make out no less than five, or possibly 24 distinct disorders (including foul brood), arising from that number of specifically different germs, all of which will require prolonged attention if anything very definite is to be arrived at respecting them." This English authority, Mr. Larrabee says "cannot be weighed against" his and Prof. M.'s guess, "when we consider the sources from which they came."

The facts are, in all cases of rotting bee-brood, there are present not less than five different kinds of germs, among them, if the brood has been taken from that which is so-called *foul*, will be foul brood virus—germs. Mr. Cheshire says he has discovered two distinct families of foul brood germs. I don't dispute him, but I am confident he is mistaken—as to identifying foul brood germs among others present in decomposing brood.

In Rochester, N. Y., we have an institution giving "new light" on the science of microscopy, wherein are scienced bacteriologists and equipage, all of which is reputed equal to any in the world. I am "prepared" to, and do, challenge Mr. Larrabee, who controverts my statements, to demonstrate that foul brood virus may be distin-

guished from other germs present in rotting bee-brood. I wrote: "Germs pervade all rotting brood, but only such as feed upon animate larva are foul-brood virus. A glass," etc. No reader could infer therefrom that I had reference to such—"other germs"—as those germs frisking in sauer-kraut, etc.

THEORY OF PARTHENOGENESIS.

On page 599, Mr. H. Reepen, the correspondent in Germany, refers to my controverting the absurd claim that the term parthenogenesis may properly be applied to the production of drone-bees, and says my definition is "the sum of ignorance."

Mr. Reepen refers me to "the book by Cowan, 'The Honey-Bee.'" It appears that he takes his belief from that work. I have been a student in bee-lore beginning anterior to Mr. Cowan's writings, which I have read, and also the criticisms on his excellent book. Mr. Reepen would fain be "partly companion" of Mr. Cowan, but, unlike him, Mr. R. controverts by weak diction, while Mr. Cowan argues in a logical sense. Mr. Reepen quotes Mr. Metzger, and controverts his "statements," not by offering any evidence or reasons, but says he is "deadly sure he (Mr. M.) is not right." It does not appear that Mr. R. is at all competent to speak on the subject, yet he submits his "dead sure" as a setting of the issue against the proof and arguments of many who are shown to be competent to handle the case.

Mr. Reepen attempts to teach me "what is meant by parthenogenesis now-a-days," from which it is to be inferred that he knows that the meaning of the term has undergone a change, or changes. The term is not susceptible of an issue being had as to its meaning, nor rendered doubly in any way, but its misapplication may be, and has been, very erroneously applied.

The reproduction of certain species of insects is absolutely different by reason of a difference in the law of Nature governing the production. The reproduction of drone-bees is in nowise the same as that of certain other families of insects. There is no such thing as "the successive reproduction of procreating" drones from unfertilized ovum, but such is the case with certain species, to a limited extent; but all reproduction is dependent upon semen. Some species reproduce for a time without renewal, or first fertilization, but semen is Nature's law of reproduction. The fact that the reproduction of drone-bees is governed by

a law radically different from that governing the reproduction of insects without a first *complete* fertilization, proves that parthenogenesis cannot be properly applied to the reproduction of both of the distinct species of insects.

If "what is meant by parthenogenesis *now-a-days*," as per Mr. Reepen, defined by Mr. Cowan, was not made legitimate until his rendering, then it is easy to explain the misapplication of the term as used in the "Dzierzon Theory." The Germans jumped to the conclusion that because drone-bees, as it appeared to them, are procreated without a first fertilization, the term—parthenogenesis—applied equally proper to both distinct species. So now-a-days there are disciples of the old school parthenogeneticists, and if Mr. Reepen is correct, there is at least one disciple of the new advent.

Richford, N. Y.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Rolling in the Honey.

Bees came out of winter quarters here in fine condition, and are now rolling in the honey from white clover.

T. J. HENDERSON.
Poplar Bluff, Mo., May 18, 1893.

Hard Winter and Backward Spring.

Bees did not winter very well in this locality. It was a hard winter, over four months without a flight. To make it still worse, we have had a very backward spring.

ISRAEL OVERHOLT.
South Cayuga, Ont., May 18, 1893.

Six Months in the Cellar.

This is the 3rd of May, and our bees are not all taken from the cellar yet. I put my bees into the cellar about Nov. 10th, and none of them have been out since, and there has not been a suitable day to put them out for the last three weeks. This makes about six months' confinement.

Mauston, Wis. FRANK McNAY.

Good Record for a Hard Winter.

I have added another winter's experience with absorbents and sealed covers. My bees were packed last fall on the summer stands, with an outer case over each hive, packed with dry planer shavings, with a pine board $\frac{3}{4}$ of an inch thick, covered with a dry cushion, on part of them. The balance were covered with a thick, porous cushion, as described on page 402.

I have just completed my "spring examination," removing every frame from every hive, and noting carefully the condition of each colony. A careful comparison of the results showed but little difference, with a slight balance in favor of absorbents.

I packed 26 colonies last fall, and have the same 26 colonies now, with laying queen in each one of the hives. Isn't this a pretty good record for such a long, cold winter as the last, in latitude of $43\frac{1}{2}$ degrees? Not so with all my neighbors' bees; some sustained a loss of 67 per cent. It pays to pack bees well in the fall.

J. P. SMITH.
Sunapee, N. H., May 1, 1893.

Bees in Good Condition.

My bees are in good condition this spring. I have a way of wintering bees on the summer stands that I never have seen described. I put the hives on four bricks, put old boards or bricks up close around the hive, dig a trench around, and bank the earth up around the hive, sloping it so as to run the water off. I fill in 6 inches of chaff over the brood-chamber. I have followed this practice for several years, and have not lost a colony yet.

W. H. SOULE.
St. Joseph, Mo., May 3, 1893.

Conditions for Successful Wintering.

I think I have hit upon the right plan for successful wintering bees in my locality. In the fall of 1891 I put 4 light colonies of bees into the cellar under the house. I had given them young Italian queens in September, and as they had very little honey, I fed them about 15 pounds of granulated sugar made into syrup, per colony.

My cellar was infested with rats, so I drove stakes in the floor—which is sandy—so that they stood 2 feet high; on the top of these I inverted some old tin pans, and then laid two 2x4's, 16 inches apart, and I nailed them fast. I placed the hives across them, removed the oil-cloth above the frames, and raised the hives an inch from the bottom-boards, by putting blocks under the corners.

The bees came out in the spring in fine condition, and no spring dwindling. I fed them a little to stimulate brood-rearing, and increased to 15 good, strong colonies (all natural swarms but two), and they gave me over 200 pounds of nice comb honey in one-pound sections.

When I put them into the cellar on Nov. 15, 1892, three of them were light in stores, and I put on $\frac{1}{2}$ -story supers, and laid some partly-filled sections on the frames. One

of these colonies failed to get their feed, and starved. I lost one other colony which was queenless, but had six frames nearly full of sealed honey. The temperature in my cellar did not range above 45 degrees, Fahr., nor below 38 degrees. I took the bees out on March 31st—13 good colonies in fine condition. To sum up for successful wintering:

- 1st. Young or vigorous queens.
- 2nd. Feed before cold weather, if necessary.
- 3rd. The above conditions will give plenty of young bees.
- 4th. Moderate-sized colonies—not too many bees.
- 5th. Plenty of room between the bottom and hive, or use no bottoms in the cellar.
- 6th. Even temperature—40 to 45 degrees, Fahr.

B. H. NEWLAND.
Melrose, Wis., April 3, 1893.

Loss from Wet Fall and Damp Cellar.

Of the 32 colonies which I put into the cellar on Nov. 20, 1892, only 17 came out alive. They had plenty of stores, but I lay the cause to the wet fall of 1892, and the dampness of the cellar on that account.

ALEX. F. KOPPLIN.

Zumbrota, Minn., May 3, 1893.

Good Report for 1892.

Last spring I bought 4 colonies of Italian bees, and put 13 into winter quarters last fall; this spring I have 12 colonies that wintered. I got 300 pounds of honey last year, besides the 9 colonies increase. I understand that 50 per cent. of the bees died in winter in this part of the country. Mine were wintered in cases on the summer stands. I think Mr. Johnson is mistaken about all the bees dying that were left out.

JERRY BARTLETT.

Audubon, Iowa, May 7, 1893.

Big Snow-Storm—Bottom-Boards.

We are now (April 21st) having the heaviest fall of snow, in the last 48 hours, that Minnesota has ever witnessed at this time of the year. There is from 18 to 24 inches of beautiful white snow on the ground this morning. If the snow had been light and dry, it would have measured 36 inches deep, but it is not going to last long. It will retard seeding until about May 1st.

I put 24 colonies of bees into the cellar last fall, and all are alive but one, and they died for want of food. I put them out about April 10th, and the most of them had a good flight, and that night it rained and snowed and froze up, so I took all of my light ones into the cellar again, and am feeding them, but I have 12 still out under the snow.

On page 489 this question is asked: "Will the colony swarm?" I sent to Illinois last June and got two frames of bees and brood, and put one frame in each hive with a queen, and I see they are as heavy as any of my old colonies this spring. They don't

often swarm, but usually fill the hive in fair season.

I have but one tight bottom-board, and as soon as the weather gets warm I shall loosen that. I like the bottom-boards so that I can change them when I think a new one is better. For wintering, some of my neighbors tier up the hives, with the top tight, and bottom-board off, piling them up three hives high, in pyramid shape, leaving a space between the hives of the two lower tiers.

MARK D. JUDKINS.

Osakis, Minn.

The Origin of Foul Brood.

I have discovered the origin of foul brood. If any of the readers of the BEE JOURNAL know what it is, I will give them four weeks to reply through this paper, after the publication of this article, then I will give it to the public.

C. P. HEWETT.

Kingston, Wis., May 5, 1893.

The Blast and Draft in Bee-Smokers.

Of course I have read with great interest Mr. Cornell's experiments with smokers. He states that I "do not deny the assertion in regard to blast." I will say that I have never denied, or compared either the honey-knife or smoker. In the 14 years we have been making them, we have received but one complaining letter, and that came indirectly and through interested parties.

What Mr. Cornell calls "indirect current," we demonstrated before bee-keepers heard of a Bingham bee-smoker or Direct Draft.

Direct Draft in bee-smokers is Bingham's invention, and the more direct it is, the better the smoker.

The "blast" is another thing, and old bee-keepers have regarded ours as sufficient and reliable.

I have had many letters suggesting different "blasts," and read of "continuous blasts," etc., in bee-papers. It would be easy to show why they were not adapted to the special needs of bee-keepers.

It is proper for me to express my gratitude to bee-keepers, to Mr. Cornell, and the *Review*.

T. F. BINGHAM.

Abronia, Mich., May 23, 1893.

A Cold Place, but Bees Wintered.

I put 14 colonies of bees into the cellar on Nov. 12, 1892, and on March 28, 1893, I took out 10 of them. They had a good flight, and I put them back into the cellar again that evening. On April 20th we had a snow-storm of 16 inches, so that made the season very late. We had nearly three feet of snow during the winter, and very cold—it got down to 32 degrees below zero. How would that do for wintering bees on the summer stands?

On April 29th I took out 7 colonies, 4 of them did not have a flight since Nov. 12th, or 136 days—more than that, as they did not fly for a few days before I put them into

the cellar. The other 7 I took out to-day. Those I took out on April 29th gathered the first pollen to-day from willows. Seven of the 14 are very strong, 4 are medium, and 3 are weak.

The sun has not been shining all day at a time for over a month. It rains or snows about four days in a week. Some of the snow of April 20th is with us still. The mercury hovers between 30 and 40 degrees above, but to-day it got up to 52 degrees, with prospects of better weather.

I like the AMERICAN BEE JOURNAL, but there are some things in it that won't fit this climate. When the mercury shrinks to from zero to over 30 degrees below, and stays below for a month at a time, and the wind blowing a gale for three or four days at a time, I think it would take a pretty tough bee, with good flannel clothes on, to stand it packed on the summer stands. But as a whole, the BEE JOURNAL is a good paper. Long may it prosper!

JOHN M. SEILER.

Chanhassen, Minn., May 2, 1893.

Large Yield from Clover Expected.

We have had a very hard winter on bees, and the loss has been very heavy. I have lost 8 out of 52 colonies. They were in poor condition this spring, but are building up fast. The strongest are making preparations for swarming. I think I will have some swarms by another week. The clover looks fine, and I expect a large yield from that source.

W. M. HOUSEL.
Wertsville, N. J., May 22, 1893.

Quite Heavy Losses—Rainy Weather.

Reports from bee-keepers around here indicate quite heavy losses the past winter. Some lost $\frac{1}{2}$, some $\frac{1}{4}$, and some all. My own loss is but one colony. The bees came out for a flight the latter part of February, and one entire colony left the hive and entered another close by, that was the same color. That was all the loss I had in 10 colonies. They left about 25 or 30 pounds of honey. We are having very rainy weather, and fruit-trees are not yet in blossom.

J. R. COMMON.
Angelica, N. Y., May 17, 1893.

Uses Common-Sense Principles.

I have been working with bees for the past ten years. I keep about 30 colonies in "Modest" hives, and work for extracted honey. I winter my bees on the summer stands without much loss, without extra packing. I am not a specialist, but try to run them on common-sense principles, and they have given fair returns for my trouble.

We have a Mr. Shirley traveling the country over, transferring bees and selling a hive which he claims works wonders. He transfers all winter, and claims that is the right time for transferring! He says bees will build comb every month in the year in his hive!

T. C. MOORE.
Green Hill, Ind., May 7, 1893.

Wintered in Fine Condition.

My bees came through in fine condition. They commenced gathering natural pollen May 1st. They had been working on bran since March 10th. I bought 75 pounds of extracted honey last week for 9 cents per pound. I hauled it 10 miles, and then sold it for 12 cents per pound. Comb honey is selling at 15 cents per pound.

My neighbors lost from $\frac{1}{2}$ to $\frac{1}{3}$ of their bees the past winter. It is snowing to-day. We have had a very dry winter. There has not been more than three weeks at a time but what I have seen bees out.

In regard to that horse-blanket mentioned by Mr. Reynolds, on page 405, I would say that it was the sweat on the blanket. You may drive a dry horse right through the apiary, and the bees will not notice it; but drive a sweaty one within a few rods of a hive, and the bees will go for it at once.

C. C. ZINN.

New Windsor, Colo., May 8, 1893.

No Swarming in Four Years.

I have many queens that are doing excellent work, but I have one that I know to be four years old, that I wish to tell about. Her colony has never swarmed, but gives 200 pounds of honey each year. She is now occupying 32 Langstroth frames, and the last given them is nearly ready for the extractor. Now, don't everybody go to ordering non-swarming queens. If you knew as well as I do the cause of swarming, you would not want non-swarmers. Bees have been swarming all around me for two weeks.

F. C. MORROW.
Wallaceburg, Ark., May 2, 1893.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.
June 16, 17.—S. E. Kansas, at Bronson, Kans.
J. C. Balch, Secy., Bronson, Kans.
Oct. 11, 12, 13.—North American (International), at Chicago, Ills.
Frank Benton, Secy., Washington, D. C.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller...Marengo, Ills.
VICE-PRES.—J. E. Crane.....Middlebury, Vt.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York...Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor...Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.

Great Premium on page 675!

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Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, May 27th, 1893:

CHICAGO, ILLS.—Honey is about cleaned up so far as fine comb is concerned. Quite a good deal of poor to fair is on sale, prices ranging from 13 to 15c. Fancy would bring 18c. Extracted, 6@8c. Beeswax, 25c.

R. A. B. & Co.

KANSAS CITY, MO.—Receipts and stocks very light, demand good. We quote: No. 1 1-lbs. 10@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6c.

Beeswax—20@23c. C-M. C. C.

CINCINNATI, O.—A short supply of extracted honey is the cause of a slow demand. It forbids an effort on our part to sell. It brings 6@8c. There is no choice comb honey on our market, and prices are nominal at 12@16c., in a small way.

Beeswax—Demand good, at 22@25c for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Comb honey is well cleaned up. Fancy white is selling at 14@15c. Off grades, 12@13c., and buckwheat, 9@10c. Extracted is dull, and the market well stocked with West India honey, which sells at from 68@75c per gallon. Beeswax, 26@28c.

H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality. 1-lbs. Beeswax is neglected at 22@23c. S., L. & S.

KANSAS CITY, MO.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8@12c.; dark, 6@7c. Beeswax—23@25c. J. A. L.

BOSTON, MASS.—Honey is selling slow and prices are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.

Beeswax—None on hand B. & R.

MINNESOTA, MINN.—Honey is in good demand, especially for fancy white clover. There is considerable of the low grade on the market. Extracted is also improving in prices. Beeswax in light demand. Fancy white clover, 16c.; golden-rod, 1 lb. sections, 13@14c.; dark, 12@13c. Extracted, 9@10c.

J. A. S. & Co.

ALBANY, N. Y.—Honey market is very quiet now, as between seasons. Beeswax—at 30@32c. for good color. H. R. W.

Capon and Caponizing, by Edward Warren Sawyer, M. D., Fanny Field, and others. It shows in clear language and illustrations all about caponizing fowls; and thus how to make the most money in poultry-raising. Every poultry-keeper should have it. Price, postpaid, 30 cents; or clubbed with BEE JOURNAL one year, for \$1.10.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.

HILDRETH BROS. & SEGELKEN,

28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.

CLEMOMS-MASON COM. CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Bee-Keeping for Profit.—We have just issued a revised and enlarged edition of Dr. Tinker's book, called "Bee-Keeping for Profit." It details his most excellent "new system, or how to get the largest yields of comb and extracted honey." The book contains 80 pages in all, and is illustrated. Price, postpaid, 25 cents, or clubbed with the BEE JOURNAL for one year, for \$1.15.

The Washington Convention Report is now in pamphlet form, and we shall be pleased to mail a copy to any one desiring it, for 25 cents. It contains 32 pages. As only a very limited number were printed, you should order promptly if you want a copy.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at **10 cents per line**, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

TO EXCHANGE—High Grade Safety Bicycyle, for Honey or Wax. 17Atf J. A. GREEN, Ottawa, Ill.

TO EXCHANGE—New Cowan Extractor for choice extracted honey. 22A2 J. H. & A. L. BOYDEN, Saline, Mich.

BARGAINS—Harbaugh stock. Lang. Brood Frames, 50c. per hundred in 500 lots. Imp. L. S. Supers, \$3 for a crate of 25. Only a few at these prices. E. T. ABBOTT, St. Joe, Mo.

Convention Notices.

KANSAS.—There will be a meeting of the Southeastern Kansas Bee-Keepers' Association on June 16 and 17, 1893, one mile west of Bronson. All are cordially invited to be present. J. C. BALCH, Sec.

Bronson, Kans.

INTERNATIONAL.—The North American Bee-Keepers' Association will hold its 24th annual convention on Oct. 11, 12 and 13, 1893, in Chicago, Ills. Not only is every bee-keeper in America, whether a member of the society or not, invited to be present, but a special invitation is extended to friends of apiculture in every foreign land. FRANK BENTON, Sec. Washington, D. C.

Amerikanische Bienenzucht is the name of a bee-book printed in the German language, which we now have for sale. It is a hand-book on bee-keeping, giving the methods in use by the best American and German apiculturists. Illustrated; 138 pages; price, postpaid, \$1.00. It is just the book for our German bee-keepers. We club it with the BEE JOURNAL for one year, for \$1.75.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Advertisements.

50 Second-Hand Hives.

I WILL sell 30 New Heddon and 20 L. Simplicity hives. Frames filled with good straight combs, mostly wired, containing from 5 to 15 lbs. of honey to the hive. Price of Heddon, \$3.50, and L. Simplicity, \$2.50 each. A discount of 5 per cent on orders for 20 hives and upwards. Will exchange for First-Class Incubator; Eggs for Hatching; of B. Leghorn and B. Plymouth Rock fowls; Italian queens, or a Spraying pump, as part pay for hives.

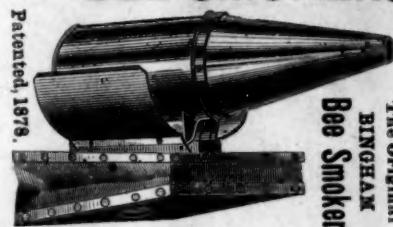
A. WORTMAN,
22A2t SEAFIELD, White Co., IND.
Mention the American Bee Journal.

COMBS & SECOND-HAND HIVES.

25 2-story 9-Frame Langstroth Hives, in first class condition. Also, between 400 and 500 good Combs (worth at least 10 cts. each) in which the Bees died the past winter. The outfit is well worth over \$75.00. Will sell the whole for only \$50.00. Speak quick, if you want them. Will be put on board cars at Wilmette, Ills., 14 miles north of Chicago. We are offering them for a friend of ours who lives there. Address,

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Original, Unimproved BINGHAM BEE-SMOKERS



The perfect or improved series of Bingham Smokers, consisting of the 3 larger sizes with all improvements, will be sent by mail postpaid, as follows:

**Large, \$1.50; Conqueror, \$1.75;
Doctor, the largest smoker made, \$2.00.**

More than 100,000

BINGHAM & HETHERINGTON

Honey-Knives

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IN DAILY USE.

Illustrations sent free.

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ABRONIA, MICH.

MORRIS CROSS-ROADS, Pa., May 15, '93.
T. F. BINGHAM:

DEAR SIR—I received the Smoker in good order. The wire-handle and bent-tube are a great improvement. The wire-handle is a great convenience in removing the cone, entirely prevents burning of the fingers, and the bent-tube enables the bee-keeper to use the smoke just where he needs it, without any danger of soot, ashes or fire. It entirely does away with spoilt sections or the dropping of fire. I thought the old Bingham Smoker was good, and cannot see what the new one leaves to be desired.

Yours truly,

R. W. HIGGINBOTHAM.

Fine Italian Queens.

Tested, \$1.00 each; Untested, 60c.
From Best Imported Mothers Only.

ALL young, and for Gentleness, Industry and Uniformity of Color, their Bees are unsurpassed. Safe delivery. Must send P. O. Money Order on Decatur, or remit by registered letter. **CLEVELAND BROS.**

DECATUR, Newton Co., MISS.

Mention the American Bee Journal.